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(54) NEGATIVE ELECTRODE MATERIAL FOR NONAQUEOUS SECONDARY BATTERY AND ITS MANUFACTURE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a new negative electrode material for a nonaqueous electrolyte secondary battery with high voltage, high capacity, satisfactory charging/discharging cycle characteristics, and provide its manufacturing method.

SOLUTION: A semiconductor thin film of an element or the compound of at least one kind selected from among groups IIIB, IVB, VB of the periodic table, capable of inserting/releasing lithium ions is used as the negative active material of a negative electrode, a metal oxide containing transition metals as the constituting element is used as the positive active material of a positive electrode, and a lithium ion conductive nonaqueous electrolyte prepared by dissolving a lithium compound in an organic solvent, or holding an organic solvent containing a lithium compound as a solid solution or in which a lithium compound is dissolved in a polymer is used as an electrolyte. By assembling these positive electrode, negative electrode and electrolyte, a nonaqueous electrolyte secondary battery with high capacity, high voltage, and satisfactory charging/discharging cycle characteristics is obtained.

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